



ALVAREZ & MARSAL
SOUTHEAST ASIA & AUSTRALIA

ACCELERATING THE ENERGY TRANSITION:

A BLUEPRINT FOR UNLOCKING \$120B+ IN PRIVATE CAPITAL

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FOREWORD

Australia is at a crossroads in its energy transition. With coal-fired power stations set to be decommissioned by 2035 and a target of 82% renewable energy by 2030, the nation has set ambitious goals to achieve net-zero emissions by 2050. Yet, despite record-breaking investment, government initiatives, and industry trials, the transition is faltering, struggling to attract sufficient private capital and investment. The challenges are mounting, and the stakes are enormous: billions of dollars in investment, the future of Australia's energy security, and its ability to meet global climate commitments.

In response, Prime Minister Anthony Albanese recently hosted a landmark foreign investment summit to Australia's energy transition and help bridge the nation's clean energy investment gap. At the same time, A&M believes there is already significant potential within the local market to further boost investment. Why? In August 2025, A&M conducted four Energy Exchange sessions with 40 senior executives from a diverse range of energy value chain participants, developers, government and private capital investors, highlighting the strong appetite for investment already present domestically.

100% of local private investors surveyed during the Energy Exchange series believe Australia must first go further to make energy investments more attractive. The challenge is not the availability of local capital but rather the investment's attractiveness. Creating an environment that encourages and sustains investment will require ongoing collaboration and support from government.

There was also unanimous agreement and keen interest in exploring decentralised Behind-the-Meter (BtM) renewable energy solutions in the commercial and industrial sector, viewed as a high-return and scalable opportunity provided the market is adequately de-risked.

This is not merely a policy issue it is an economic imperative. The choices made today will determine whether Australia remains a global leader in renewable energy or becomes a cautionary tale of missed opportunities.



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AUSTRALIA'S RENEWABLE ENERGY SURGE: MOMENTUM AMIDST CHALLENGES

Australia's renewable energy sector is on the rise, breaking records and setting new benchmarks for growth. In 2024 alone, clean energy investments soared to an unprecedented AUD 12.7 billion¹, with AUD 9 billion directed toward new generation capacity. This marks the highest level of investment since the 2018 record, with AUD 4.93 billion² of that reaching financial commitment a clear signal of the sector's momentum.

Investment in and capacity of large-scale energy generation projects

Projects currently at
financial commitment
(2017 to 31 December 2023)

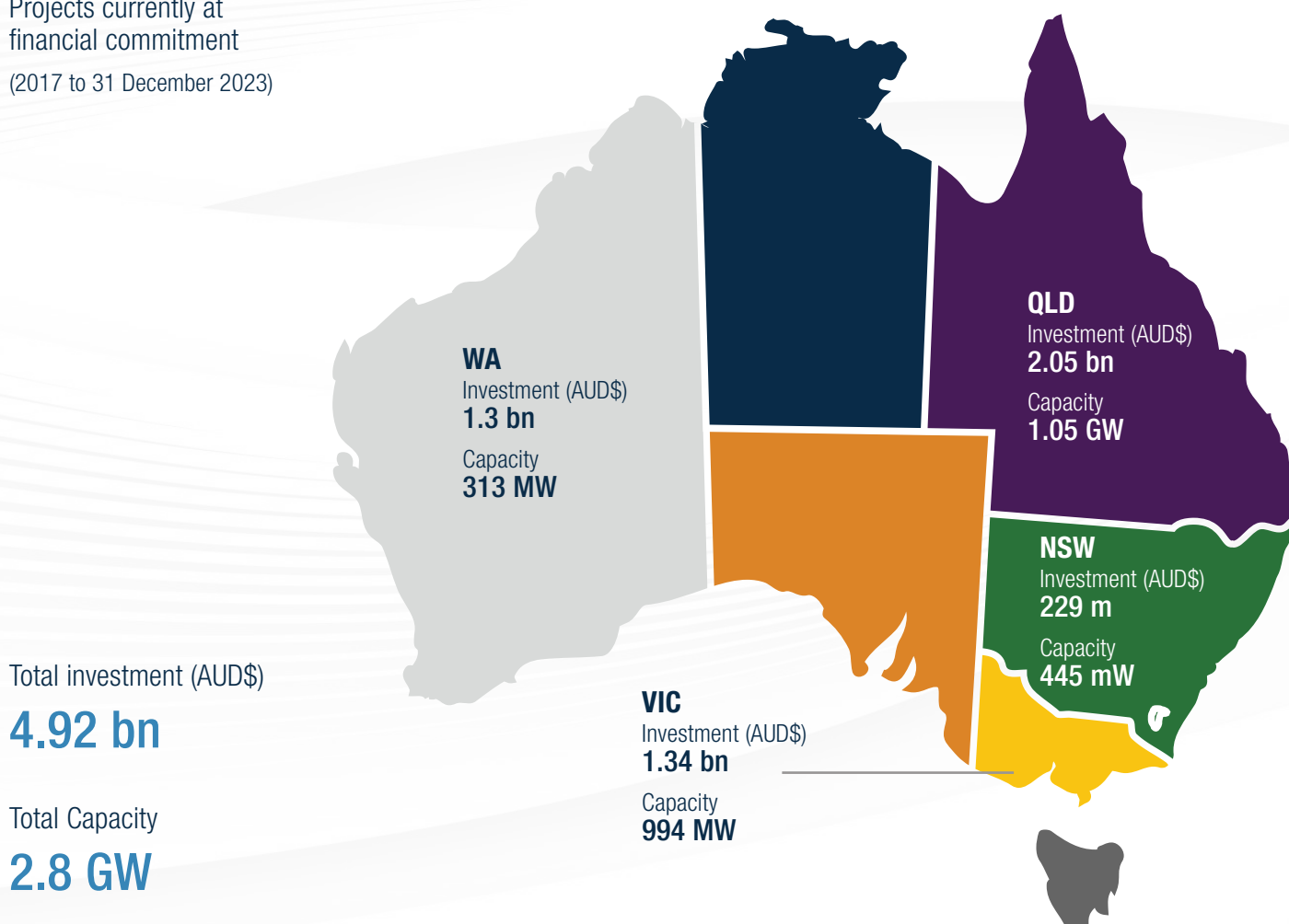


CHART SOURCE: CLEAN ENERGY COUNCIL, CLEAN ENERGY AUSTRALIA 2025 REPORT

Yet, while we have a direction and the numbers are impressive, they don't tell the full story. The government's "Future Made in Australia" package boasts a headline-grabbing AUD 22.7 billion³ allocation. But dig deeper, and the reality is less inspiring: only 10% a mere AUD 2.35 billion is earmarked for electricity transition enablement. This disconnect between ambition and the government's approach to incentive external market investment to enable execution, underscores the challenges Australia faces in turning bold targets into tangible outcomes.

¹ <https://cleanenergycouncil.org.au/news-resources/clean-energy-australia-report-2025>

² <https://cleanenergycouncil.org.au/news-resources/back-on-track-aussie-clean-energy-investment-reaches-new-highs-in-2024>

³ <https://treasury.gov.au/policy-topics/future-made-australia>

FEDERAL AMBITIONS, STATE DECISIONS: AUSTRALIA'S ENERGY POWER STRUGGLE

One of the most fascinating aspects of Australia's renewable energy journey is also the role of Renewable Energy Zones (REZs). The NEM's 43 zones are the future backbone of the National Energy Market (NEM), each designed to seamlessly integrate renewable generation and firming capacity across Australia. Together, they aim to deliver an impressive 33 TWh of electricity annually by 2030.

But: while the federal government sets the overarching goals, REZs are state-declared and managed. This adds layers of complexity to the execution of our 2030 renewable energy target.

In Western Australia, the Wholesale Electricity Market (WEM) also operates independently of the NEM, with its own set of challenges and opportunities.

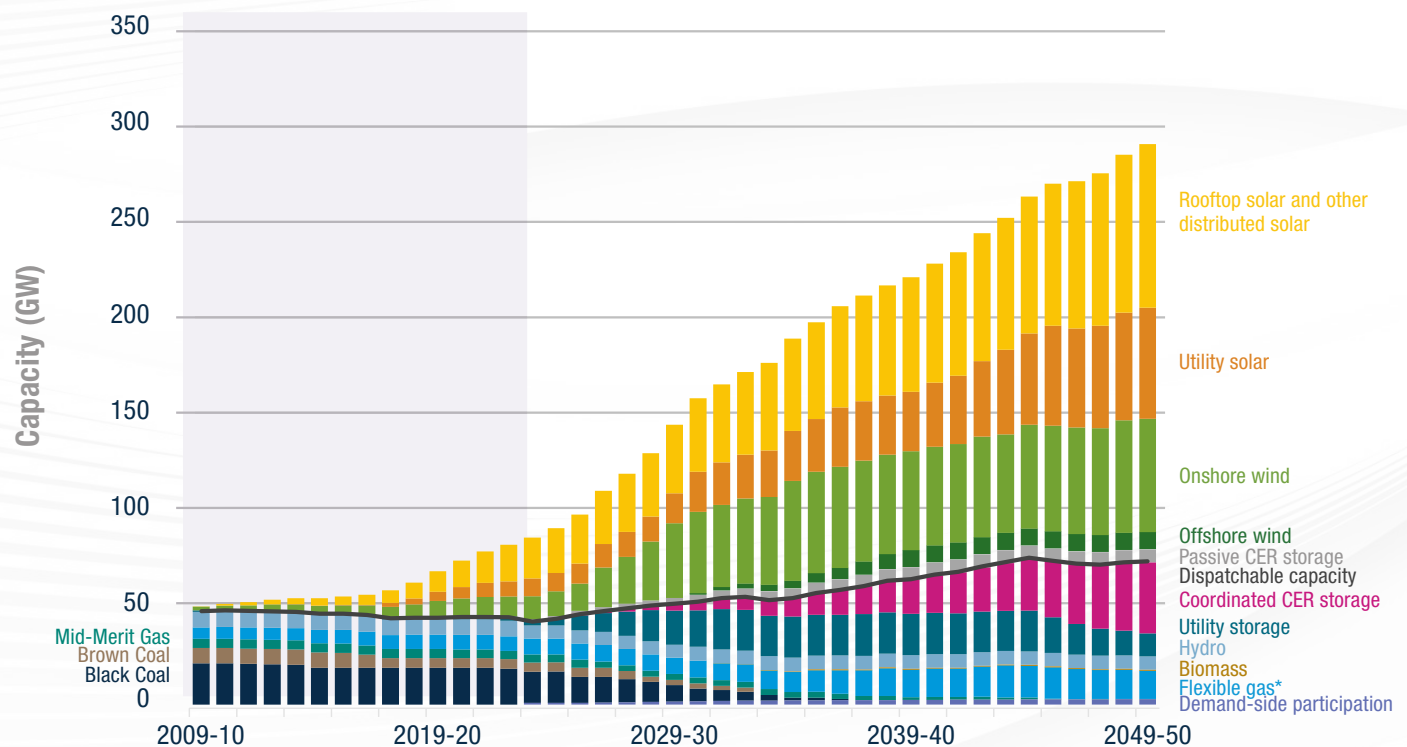
What's clear is that while substantial investment is already underway, the focus now shifts to how governments can continue streamlining coordination and reducing complexity laying the groundwork to unlock even greater levels of private investment and innovation.



THE INVESTMENT GAP: AMBITION MEETS REALITY

Already this decade, 12.5 gigawatts (GW) of new utility-scale generation and 1.3 GW/1.8 gigawatt hours (GWh) of storage has entered the NEM and 490 km of transmission has been built. A further 20 GW of generation and storage, and 2,090 km of transmission, are progressing from planning to delivery⁴. That's a solid start. Add to that another 20 GW from committed and probable projects, and you might think we're on track. But here's the reality: we need 85 GW to replace coal power stations by 2035. The gap is real and bridging it will take more than ambition it will take private capital stepping up in a big way.

Capacity Step Change across the NEM



CHARTS SOURCE: AEMO INTEGRATED SERVICE PLAN 2024

And the challenge? It's only getting bigger. Today's energy planning is based on yesterday's demand forecasts. But the world is moving fast. AI-driven data centres and more are all adding massive new loads to the grid.

By 2030, data centres alone could consume between 8%⁵ and 12%⁶ of the National Electricity Market's (NEM) grid supplied electricity. That's up from 5% in 2024. In Western Sydney, New South Wales alone, data centre projects under construction could add more than 2 GW⁷ of new load roughly equivalent to two large aluminium smelters.

Federal investment plays a crucial role in underwriting the market and de-risking projects to enable private investment deployment. However, without significant participation from private capital, the investment gap and corresponding solution gap will persist.

⁴ <https://www.aemo.com.au/energy-systems/major-publications/integrated-system-plan-isp/2024-integrated-system-plan-isp>

⁵ <https://eonadvisory.com.au/the-growing-energy-challenge-of-power-hungry-data-centers-and-how-eon-advisory-can-help/#:~:text=The%20Power%20Demand%20of%20Data,could%20nearly%20double%20by%202050>

⁶ <https://theenergy.co/article/aemo-doubles-data-centre-demand-forecast>

⁷ <https://www.dentons.com/en/insights/articles/2025/july/3/powering-australias-data-centre-boom>

BARRIERS TO PRIVATE INVESTMENT: A SYSTEM UNDER STRAIN

The energy transition is being stifled by a range of structural and economic barriers including:

Project Viability

Australia's transmission investments span one of the world's largest landmasses, supported by a relatively small population. The outcome? Exceptionally high unit costs, making electricity transport far more expensive than in most markets.

Add to this Australia's globally high tax rates and shifting tax policies. Investors face not only complex market dynamics but also evolving regulatory challenges.

Skilled labour shortages further complicate matters, delaying critical infrastructure projects and driving up costs. Then there's the issue of contracted revenue and Power Purchase Agreements (PPAs), which lock in pricing for 10+ years. Predicting pricing and managing cost recovery over such long horizons is risky, especially with razor-thin margins.

Projects focussed on standalone generation solutions without storage are also increasingly exposed due to the intermittent nature of renewable energy. Without storage, it's difficult to balance supply and demand or orchestrate dispatch to take advantage of price fluctuations through energy arbitrage. Projects that include storage are essential to ensure reliable dispatch and optimise project economics.

Several renewable energy projects around the world and in Australia are now underperforming against their business case - which may have been assuming between 11-20% returns⁸.

Planning and Installation Cost Escalation Factors – Australia

Left: real prices for key construction inputs. Right: real prices for state level construction wages.
Dotted lines denote estimates for FY25

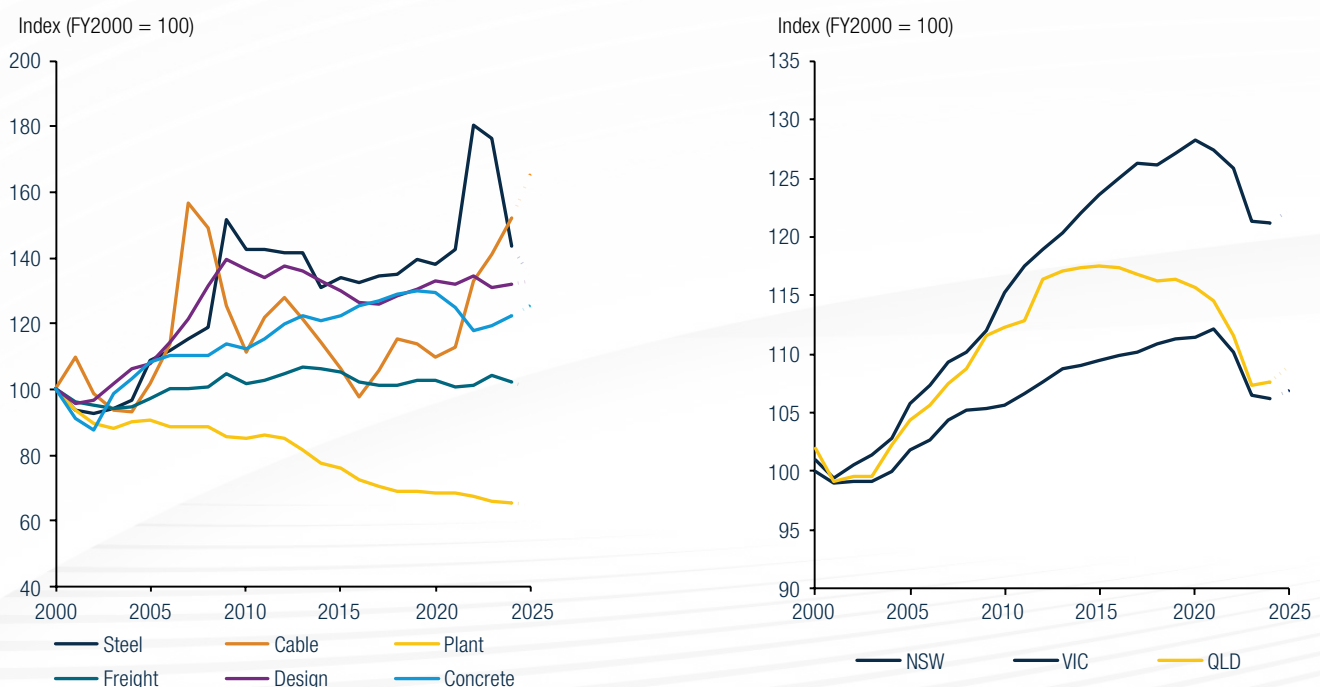


CHART SOURCE: OXFORD ECONOMICS AUSTRALIA – 2025 IASR PLANNING AND INSTALLATION COST ESCALATION FACTORS – AUSTRALIA

⁸ <https://www.abc.net.au/news/2019-04-26/renewable-energy-investment-maybe-heading-from-boom-to-bust/11041964>



Installation cost index for the 15 asset types, NEM average

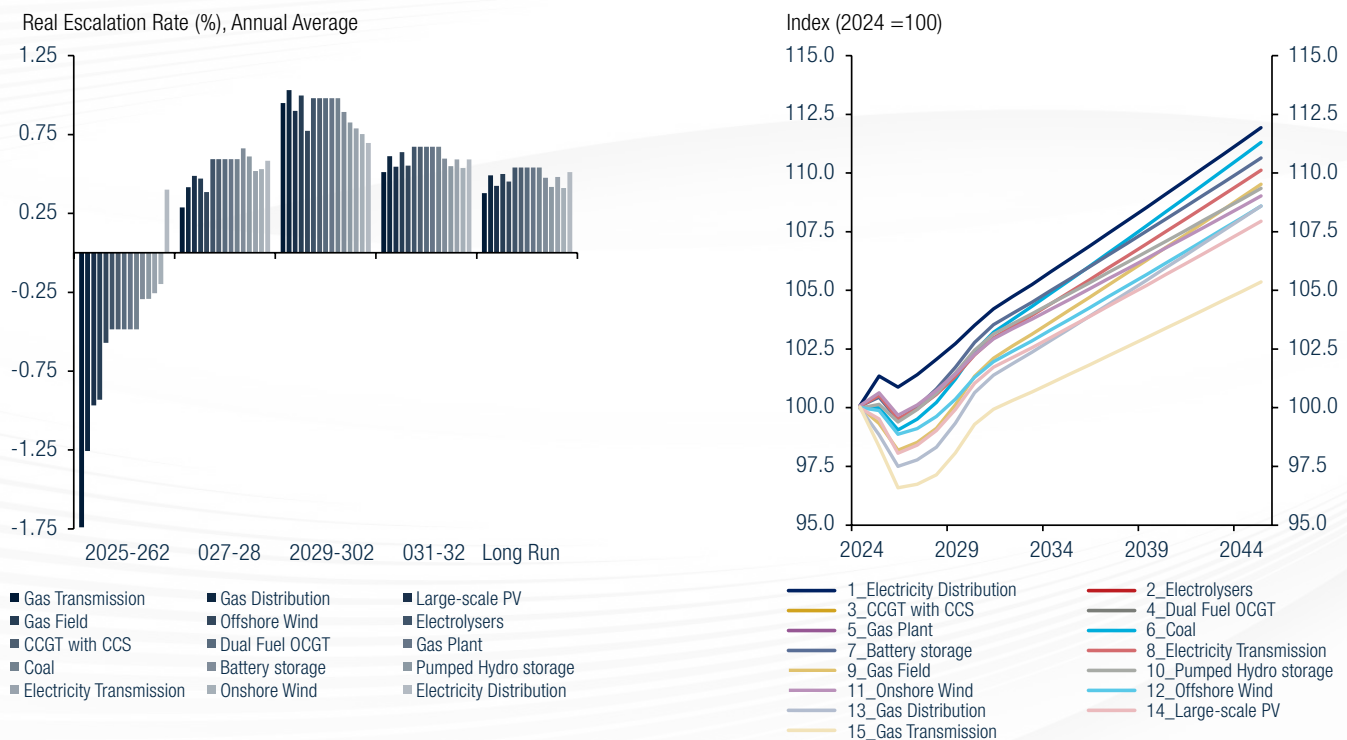


CHART SOURCE: OXFORD ECONOMICS AUSTRALIA – 2025 IASR PLANNING AND INSTALLATION COST ESCALATION FACTORS – AUSTRALIA

Infrastructure Bottlenecks

Transmission infrastructure and grid access are not keeping pace with the renewable development pipeline, creating bottlenecks that threaten to derail projects. Social licence, land access and public opposition to new transmission projects further complicate the issue.

Market Volatility and Curtailment Risks

Whilst the necessary transmission is being built, network stability risks are putting pressure on renewable energy projects. Generation assets face challenges such as curtailment and market price volatility which impact their economic viability and investment attractiveness.

Regulatory Complexity

Inconsistent regulation variability across states and between federal and state governments create uncertainty, making it difficult for investors to plan long-term projects. Renewable Energy Zones, for instance, have varying requirements across states, complicating compliance and investment strategies. Approval strategies. Environmental and grid connection delays are another significant hurdle; between 2018 and 2023, the approval rate for large-scale wind and solar projects dropped by 75% due to lengthy and complex environmental and planning processes.

THE FINANCIAL CONUNDRUM: UNLOCKING PRIVATE CAPITAL

Fuelled by access to cheap financing and a growing appetite for ESG outcomes, the race to deploy renewable energy has accelerated like never before. But beneath the surface, the reality has been sobering. Returns have fallen short of expectations, leaving many project economics on shaky ground. The result? A rising tide of unsustainable business models and according to ASIC data, a sharp spike in insolvencies is now unfolding across the sector.

Number of insolvency appointments - Australian energy generation

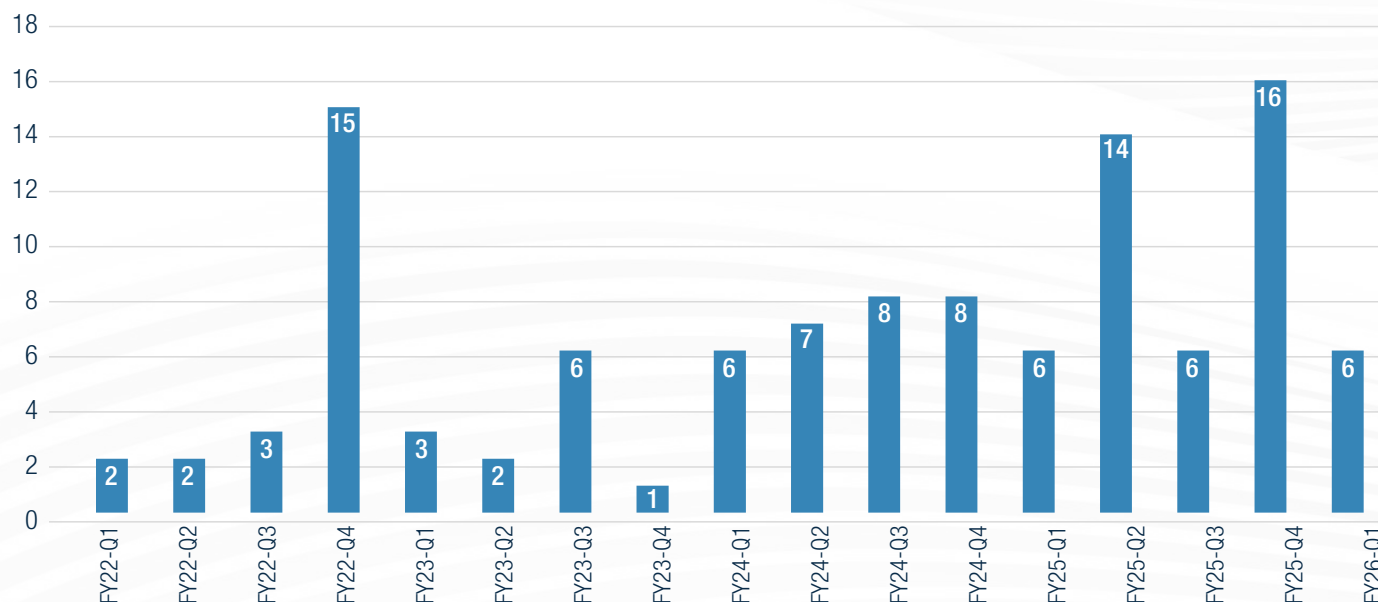


CHART SOURCE: ASIC INSOLVENCIES 2022-2025

Private capital is a missing piece of the puzzle but clearly will only be motivated by the right conditions: long-term certainty and a de-risked environment in which to invest.



WHAT NEEDS TO BE TRUE FOR INVESTMENT?

In August 2025, A&M conducted four Energy Exchange sessions featuring Audrey Zibelman, the former Managing Director of the Australian Energy Market Operator, alongside 40 senior executives from a mix energy value chain participants, developers and private capital investors. Three clear priorities emerged as needing to be true to drive investment.

Derisking Market Investments

Every executive in attendance unanimously agreed that while they support the current National Electricity Market (NEM) and Wholesale Electricity Market (WEM) review and reforms, Australia however must go further to achieve its 2033 goals and make energy investments more attractive. During these discussions, the collective wish list for de-risking investment included:

1. Addressing project obstacles, particularly around grid connection and transmission infrastructure build
2. Long term offtake commitments
3. The introduction of alternative and blended finance models

The need for structural changes to de-risk Australia and attract more investment, include evolving how the physical and financial energy markets are interrelated. The renewable technology of today is dramatically different from the energy technology from 20 years ago, and the interaction of these markets is a factor impacting investment attractiveness. This includes exploring how the risk can be underwritten during the period of transition to incentivise investors with long-term certainty.

Unlocking Private Investment in Decentralised Energy Solutions at Scale

A large portion of investment is currently focused on major utility-scale renewable projects. While these large-scale projects are essential, they often face challenges such as social licensing and grid connection complexities. These barriers can delay implementation and result in unattractive timelines for investors who are looking to secure returns in a timely fashion. However, a significant and underexplored opportunity lies in Behind-the-Meter (BtM) solutions and demand-side participation, particularly in the commercial and industrial (C&I) customer segment.

By installing solar panels and batteries on C&I properties such as warehouses, shopping centres, schools and other large facilities these structures can be transformed into decentralised virtual power plants (VPPs). These grid connected customers, can not only reduce their own energy demand but also generate a surplus that can support the grid with both base load capacity and as demand response during peak conditions. This dual benefit of reducing demand, providing surplus energy and demand response services, positions BtM solutions as a critical and essential component of the energy transition.

The market for BtM solutions in the C&I sector remains relatively unsaturated by investors, presenting a unique opportunity for higher returns compared to the crowded utility-scale market. This is a particularly appealing emerging value pools to private capital investors. During the Energy Exchange sessions, 100% of investors expressed interest in exploring such opportunities, underscoring the appetite for innovative and scalable solutions in the energy sector.

Private investors and stakeholders have already shown enthusiasm for this approach. For example, KKR's \$0.5B investment into CleanPeak Energy to accelerate provision of on-site solar/storage systems to C&I customers and Coles have partnered with Origin Zero to be Australia's largest customer aggregation agreement providing Frequency Control

Ancillary Services (FCAS), enabling orchestration of 10MW of flexible energy. Unlike utility-scale projects, which often face delays due to social licencing and grid connection issues, BtM solutions leverage existing infrastructure, making them faster and more cost-effective to deploy.

Innovative Financing Models

Financing remains the decisive factor in unlocking private investment for Australia's energy transition. Whilst capital is available, investors will only commit at scale if projects can demonstrate viable returns and reduced exposure to transition-period risks.

Innovative financing structures such as blended finance, portfolio financing and public private partnerships (PPPs) offer a pathway forward. These models distribute risk more evenly, lower the cost of capital, and make investment propositions more resilient.

Australia already has encouraging examples. The Clean Energy Finance Corporation (CEFC) has shown how public funding can unlock multiples of private capital. At the state level, entities such as Victoria's SEC and New South Wales' ESC are trialling investment and targeted support to drive the transition forward.

At the same time, the NSW government also offers a Scheme Financial Vehicle (SFV) designed to support and finance large-scale energy infrastructure projects, such as renewable energy zones and priority transmission infrastructure under a government's energy roadmap⁹.

All three initiatives show that selective underwriting can accelerate projects without displacing private market participation.

To build on these foundations, Australia needs a cohesive framework that scales beyond pilot programs and provides consistent national alignment. This should include:



Blended finance vehicles that combine public support, private equity, and long-term offtake certainty.



Portfolio financing structures that spread risk across technologies, geographies, and project stages, attracting a wider pool of investors.



Targeted co-investment mechanisms that help viable projects cross the line.



Simplified approvals and streamlined contracting to provide certainty and avoid project delays.



Clear long-term policy signals that maintain investor confidence over the life of assets.

Such models ensure that private capital is not only mobilised but also sustained throughout the transition, balancing ambition with practical pathways to deployment.

⁹ <https://www.energy.nsw.gov.au/nsw-plans-and-progress/major-state-projects/electricity-infrastructure-roadmap/roadmap-entities-and-advisory-bodies>



CONCLUSION: A CALL TO ACTION

The energy transition cannot be achieved by the market alone. Governments can play a pivotal role by viewing solutions through an investment lens and fostering the conditions that enable private capital to contribute effectively.

Australia's energy transition is ambitious, and local private capital is ready to help realise it. What remains missing is the crucial bridge between these ambitions and the investment environment needed to support them. Without stronger, consistent policies to de-risk investments, unlock new value pools, and leverage blended finance, much of this private capital will remain untapped risking both the momentum of the transition and Australia's standing as a global renewable energy leader.

As highlighted earlier, the appetite for decentralised and large-scale renewable solutions is strong, but investors need confidence and predictability to commit at scale. The financing environment must evolve to match Australia's ambitious targets by lowering barriers and creating clear pathways for sustainable energy investments to thrive.

The choice before Australia is clear: act decisively now to foster the conditions that will mobilise private capital and secure the future of the energy transition or face a widening gap that delays progress, jeopardises energy security, and diminishes the nation's competitive edge. The time for bold, coordinated action is now.

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